

Curello *et al.*
Appl. No. 10/725,236

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (currently amended) A fuel gauge adapted for use with a fuel supply and an electronic equipment powered by a fuel cell, said fuel gauge comprises:

means for establishing a remaining fuel level by measuring a property between a first location movable within the fuel supply and a second location on the fuel cell or on the electronic equipment, wherein the property is readable by an electrical circuit and is related to the amount of fuel remaining in the fuel supply.

2. (original) The fuel gauge of claim 1, wherein the fuel gauge is functional at any orientation of the fuel supply.

3. (withdrawn) The fuel gauge of claim 1, wherein said property is an electrical capacitance between two nodes and wherein a first node is located at a position that moves as fuel is removed from the fuel supply.

4. (withdrawn) The fuel gauge of claim 3, wherein a second node is located on the fuel cell.

5. (withdrawn) The fuel gauge of claim 3, wherein a second node is located on the electronic equipment.

6. (withdrawn) The fuel gauge of claim 3, wherein the first node is located on or in a liner containing the fuel and the liner is positioned within the fuel supply.

7. (withdrawn) The fuel gauge of claim 1, wherein said property is a magnetic force between two poles and wherein a first pole is located at a position that moves as fuel is removed from the fuel supply.

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8. (withdrawn) The fuel gauge of claim 7, wherein a second pole is located on the fuel cell.

9. (withdrawn) The fuel gauge of claim 7, wherein a second pole is located on the electronic equipment.

10. (withdrawn) The fuel gauge of claim 7, wherein the first pole is located on or in a liner containing the fuel and the liner is positioned within the fuel supply.

11. (withdrawn) The fuel gauge of claim 7, wherein a Hall gauge connected to the fuel gauge produces a voltage from the magnetic force and the voltage is readable by the electrical circuit.

Claims 12 - 27 (canceled).

28. (original) The fuel gauge of claim 1, wherein the electrical circuit is located in the fuel cell.

29. (currently amended) The fuel gauge of claim 1, wherein the electrical circuit is located in the electronic [[device]] equipment.

30. (original) The fuel gauge of claim 1, wherein the fuel supply is a fuel cartridge.

31. (original) The fuel gauge of claim 1, wherein the fuel supply is selected from a group consisting of disposable cartridges, refillable cartridges, reusable cartridges, cartridges that reside inside the electronic device, cartridges that are outside of the electronic device, fuel tanks, fuel refilling tanks, and fuel containers.

32. (original) The fuel gauge of claim 1, wherein said property is an oscillating magnetic field generated by an inductive sensor.

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33. (original) The fuel gauge of claim 32, wherein said oscillating magnetic field changes when an electrical conductor enters the field, and wherein the changes in the oscillating magnetic field correlates to the volume of remaining fuel.

34. (previously amended) The fuel gauge of claim 33, wherein the inductive sensor is positioned at the second location on the fuel cell or the electronic equipment and the electrical conductor is located at the first location within the fuel supply that moves as fuel is removed from the fuel supply.

35. (original) The fuel gauge of claim 32, wherein a Hall gauge connected to the fuel gauge produces a voltage from the oscillating magnetic field and the voltage is readable by the electrical circuit.

36. (previously amended) A fuel gauge adapted for use with a fuel supply and an electronic equipment powered by a fuel cell, said fuel gauge comprises:

a first sensor associated with the fuel supply and spaced a distance apart from a second sensor associated with the fuel cell or the electronic equipment, wherein the distance varies with the fuel level and indicates the remaining fuel in the fuel supply, and wherein the first and second sensors have a property readable by an electrical circuit.

37. (withdrawn) The fuel gauge of claim 36, wherein a magnetic field is formed between the sensors.

38. (withdrawn) The fuel gauge of claim 36, wherein a capacitance is formed between the sensors.

39. (original) The fuel gauge of claim 36, wherein the first sensor is positioned adjacent to a fuel liner within the supply.

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40. (original) The fuel gauge of claim 39, wherein the first sensor is positioned on the fuel liner.
41. (withdrawn) The fuel gauge of claim 36, wherein the first sensor is positioned proximate a spring pressuring a fuel liner within the cartridge.
42. (withdrawn) The fuel gauge of claim 36, wherein the first sensor is positioned on the spring.
43. (original) The fuel gauge of claim 36, wherein the second sensor is positioned in the fuel cell or in the electronic equipment.
44. (withdrawn) The fuel gauge of claim 41, wherein the spring comprises a metal spring.
45. (withdrawn) The fuel gauge of claim 41, wherein the spring comprises a foam.
46. (previously amended) The fuel gauge of claim 36, wherein the first sensor is positioned on or in the fuel supply.
47. (original) The fuel gauge of claim 36, wherein the electrical circuit is positioned in the fuel cell or in the electronic equipment.
- Claims 48-52 (canceled).
53. (new) The fuel gauge of claim 36, wherein the fuel gauge is functional at any orientation of the fuel supply.
54. (new) The fuel gauge of claim 36, wherein the fuel supply is a fuel cartridge.
55. (new) The fuel gauge of claim 36, wherein the fuel supply is selected from a group consisting of disposable cartridges, refillable cartridges, reusable cartridges, cartridges that reside inside the electronic device, cartridges that are outside of the electronic device, fuel tanks, fuel refilling tanks, and fuel containers.

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56. (new) The fuel gauge of claim 36, wherein said property is an oscillating magnetic field generated by an inductive sensor.

57. (new) The fuel gauge of claim 56, wherein said oscillating magnetic field changes when an electrical conductor enters the field, and wherein the changes in the oscillating magnetic field correlates to the volume of remaining fuel.

58. (new) The fuel gauge of claim 57, wherein the inductive sensor is positioned at the second location on the fuel cell or the electronic equipment and the electrical conductor is located at the first location within the fuel supply that moves as fuel is removed from the fuel supply.

59. (new) The fuel gauge of claim 56, wherein a Hall gauge connected to the fuel gauge produces a voltage from the oscillating magnetic field and the voltage is readable by the electrical circuit.

60. (new) A fuel gauge adapted for use with a fuel supply and an electronic equipment powered by a fuel cell, said fuel gauge comprises:

a first sensor associated with the fuel supply and spaced a distance apart from a second sensor, wherein the second sensor is relatively fixed and the first sensor moves toward the second sensor when fuel is transported out of the fuel supply, and wherein the first and second sensors have a property readable by an electrical circuit and said property is indicative of the remaining fuel in the fuel supply.